



Traffic and Parking Board

February 24, 2014



Staff Reports and Updates



King Street Bicycle Lanes and Pedestrian Improvements

Agenda Item #1



Issue:

Recommendation on review of the Director's decision to remove parking on King Street from West Cedar Street to Highland Place in order to install bicycle lanes and associated pedestrian and bicycle improvements.

Staff's Recommendation:

Staff recommends that the board recommend that City Council uphold the Director's decision to remove parking on King Street from West Cedar Street to Highland Place in order to install bicycle lanes and associated pedestrian and bicycle improvements and forward such recommendation to City Council for Public Hearing and Consideration.



Presentation Outline

- 1) Proposed Plan
- 2) Plan is in accordance with design guidelines
- 3) Plan modified to respond to safety concerns voiced through detailed public outreach process
- 4) Extensive data collection and analyses



Project Goals

- Provide direct bicycle access along King Street
- Provide facilities for pedestrians, cyclists and drivers
- Improve the safety and convenience of all street users
- Implement City Council adopted plans and policies

Proposed Plan

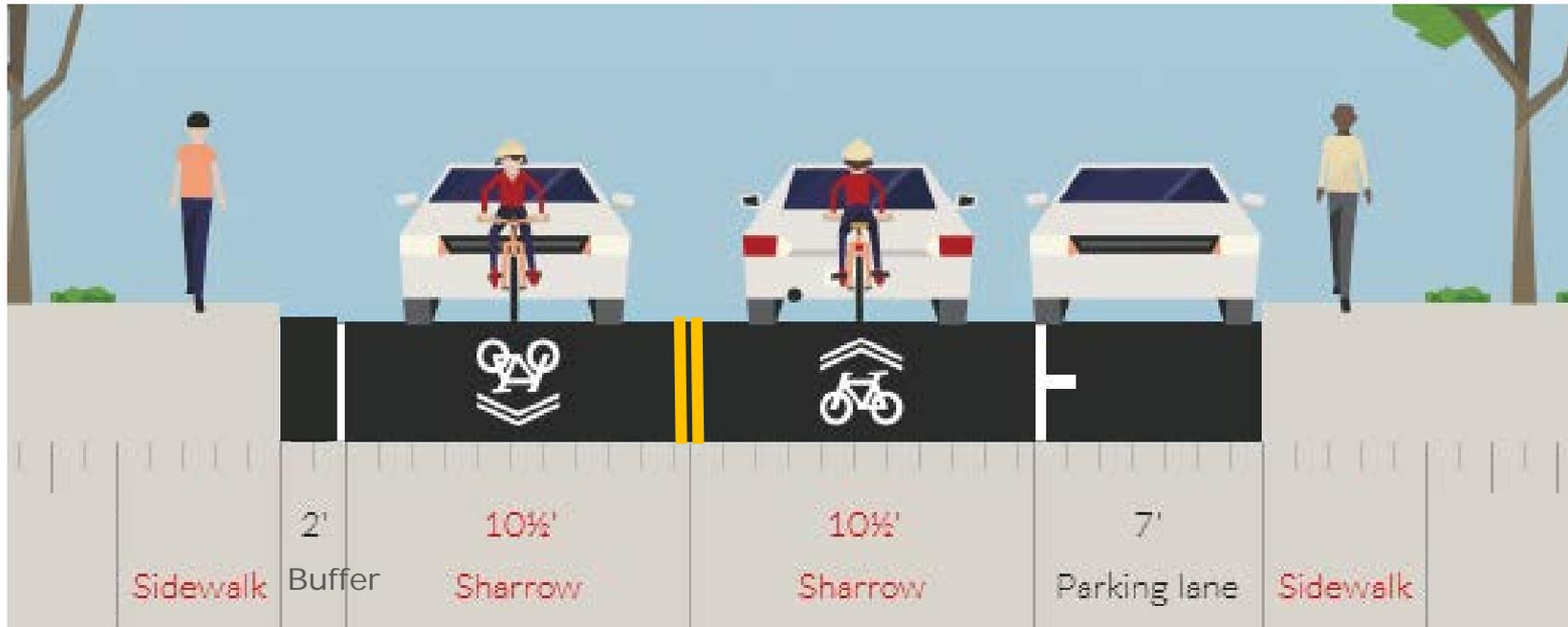


King Street: West Cedar Street to Highland Place



- Provide bike lanes in both directions from W Cedar Street to Highland Place
- Remove parking from W Cedar Street to Highland Place (27 Spaces)
- Maintain parking from Highland St to Janney's Lane
- Maintain 2 westbound lanes approaching Janney's Lane
- Maintain 2 eastbound lanes approaching Callahan Drive/Russell Road

King Street: Highland Place to East of West View Terrace



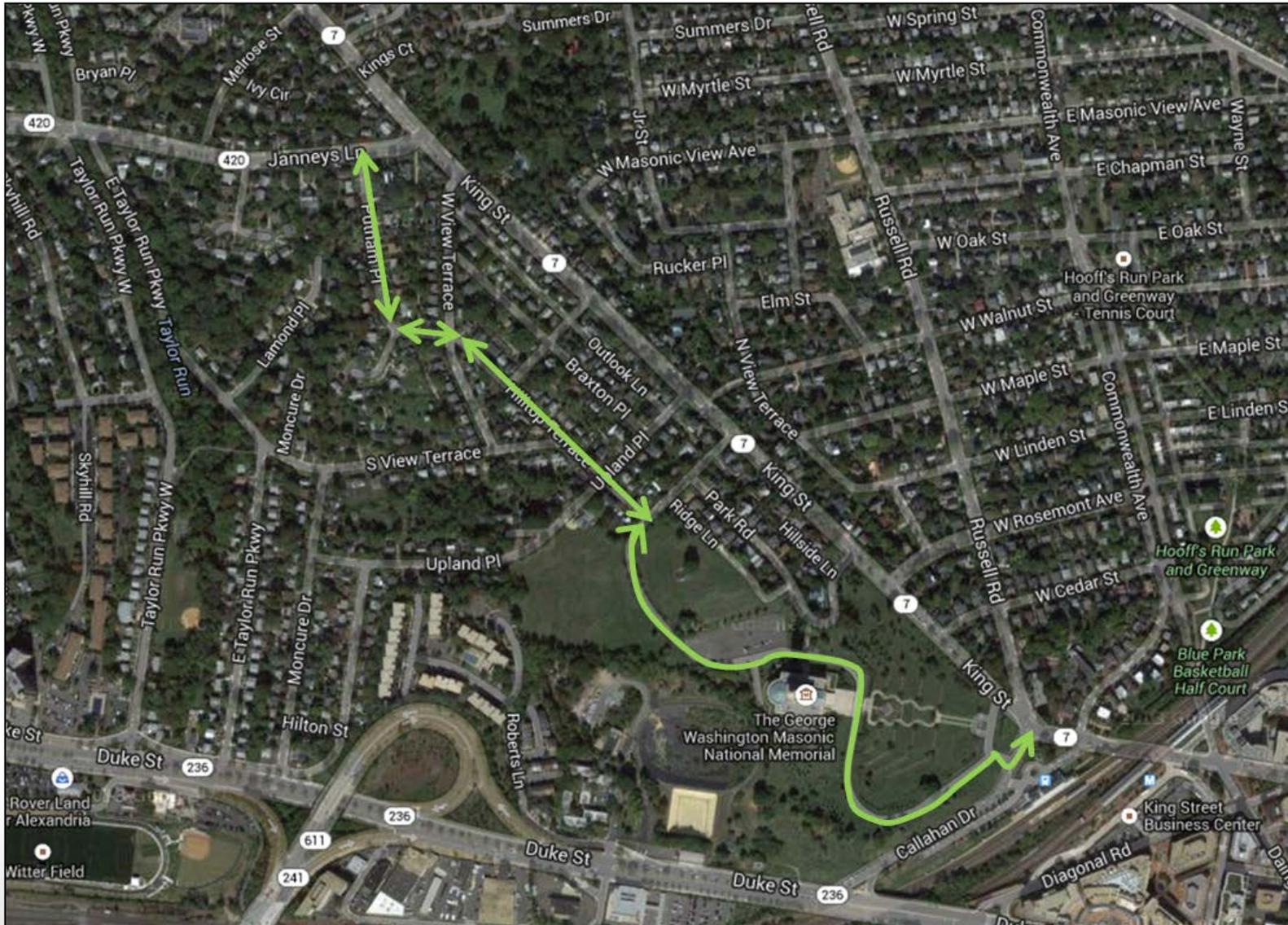
- Provide shared bike lanes where parking exists between Highland Place & Janney’s Lane
- Maintain 10 existing parking spaces
- Provide a buffer along southern sidewalk

King Street: West View Terrace to Janney's Lane



- Provide WB bike lane and EB shared lane
- Provide a 1'-3' buffer along southern sidewalk
- Install bike box for cyclists making turns onto Janney's lane

Masonic Temple





Design Guidelines

There is NO place in the plan where the design is below the minimum design guidelines

	Sidewalk Widths*	Bike Lanes**	Roadway Width***	Travel Lanes****
Minimum	39"	4'	24'	10'
King Street Plan	45" – 84"	4' - 5'	30'	10.5'

*Americans with Disabilities (ADA) guidelines

**American Association of State Highway Transportation Officials (AASHTO) & National Association of City Transportation Officials (NACTO)

***City of Alexandria: Sec. 5-8-161 Standards; enforcement.

(a) The following standards apply to parking spaces located on public streets, **to the travel way available to vehicular traffic on public streets** and to sidewalks adjacent to public streets:

(3) **Travel way on two-way streets, with parallel or perpendicular parking, shall be a minimum width of 24 feet.**

***AASHTO

"The recommended width of a bike lane is 5 feet from the face of a curb or guardrail to the bike lane stripe."

"If the joint is not smooth, 4 feet of rideable surface should be provided."

- AASHTO. Guide for the Development of Bicycle Facilities.

Safety

- In a reduced-speed urban environment, the effects of reduced lane width are different. On such facilities, the risk of lane-departure crashes is less. The design objective is often how to best distribute limited cross-sectional width to maximize safety for a wide variety of roadway users. Narrower lane widths may be chosen to manage or reduce speed and shorten crossing distances for pedestrians. Lane widths may be adjusted to incorporate other cross-sectional elements, such as medians for access control, bike lanes, on-street parking, transit stops, and landscaping. The adopted ranges for lane width in the urban, low-speed environment normally provide adequate flexibility to achieve a desirable urban cross section without a design exception.

- **Federal Highway Administration**

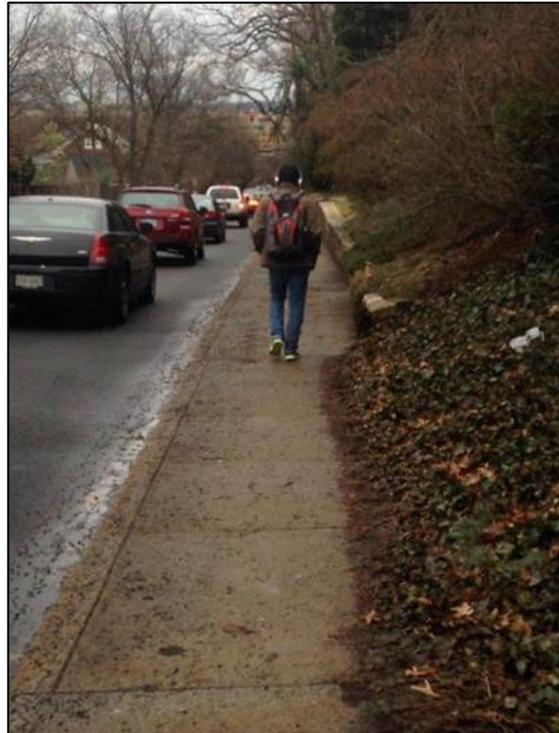
Lane width (ft)	Reduction in Free-Flow Speed (mi/h)
12	0.0
11	1.9
10	6.6

Source: Highway Capacity Manual

Safety



Safety





Public Process

- Taylor Run Civic Association: 6.12.13
- Bicycle & Pedestrian Advisory Committee: 8.19.13 and 10.21.13
- Traffic & Parking Board: 7.22.13
- Neighborhood Flyer: 9.12.13
- Public Meeting #1: 9.18.13
- Public Meeting #2: 10.30.13
- Environmental Policy Commission: 11.04.13
- Parks and Recreation Commission: 11.21.13
- Traffic & Parking Board: 11.25.13
- Taylor Run Civic Association 1.16.14
- Taylor Run Civic Association 2.19.14
- Traffic and Parking Board 2.24.14
- City Council 3.15.14



Concerns Voiced and City Response

Comments/Concerns	Response
Difficult to cross at Upland Pl.	Installing rapid flashing beacon
Cyclists won't want to share lanes	Provide alternate signed route through neighborhood
Turning onto Janney's Ln. is difficult for cyclists	Provide bike box at Janney's intersection
Need more accessible crossings at Highland	Looking into feasibility of installing pedestrian signals and push buttons
People run the light at Highland	Requested APD patrol
Visitor parking	Added 3 spaces across King at Park and Carlisle and maintained parking at Highland
2500 Block has short driveways	Maintain existing parking
Emergency vehicle access	Road is the same width – cars can pull to the side to let EV pass as they do now
Need more data	City collected new speed & volume counts



Concerns Voiced and City Response

Comments/Concerns	City Response
Vehicles are speeding and causing unsafe environment	Measured vehicle speeds and added additional traffic calming to plan
2500 block has short driveways and highest parking utilization	Studied parking and modified plan to maintain parking in this section
Deliveries/drop off/carpool	“No Parking signs” not “No Standing” – Provided wider lane on north side
Moving vans	Permits can be obtained
Backing into/out of driveway	Provided wider bike lane on the north side of the street to create buffer
Sidewalks are too narrow	Providing bike lane will keep cyclists off sidewalks & added buffer will improve safety for pedestrians
Too much speeding on King Street	Narrowed travel lanes to decrease speed & will install speed board if desired & feasible

Modifications to Original Plan Based on Community Input

- Maintained parking west of Highland Place where parking utilization was highest
- Widened westbound bike lane and narrowed eastbound bike lane to provide for more visibility on the north side of the street for entering & exiting driveways and loading & unloading
- Added 3 additional parking spaces on Park and Carlisle
- Provided bicycle box on King Street at Janney's Lane



Modifications to Original Plan Based on Community Input

- Buffered south sidewalk between Janney's Lane and Highland Place for pedestrian safety
- Rapid flashing beacon and High visibility crosswalk at Upland Place to provide safer crossing
- Pedestrian countdown signals with push buttons on King Street at Highland Place
- New crosswalks at Park Place, Carlisle Drive, West Cedar Street & West View Terrace
- Speed board between Highland Place and Upland Place (if feasible)





Data Collection

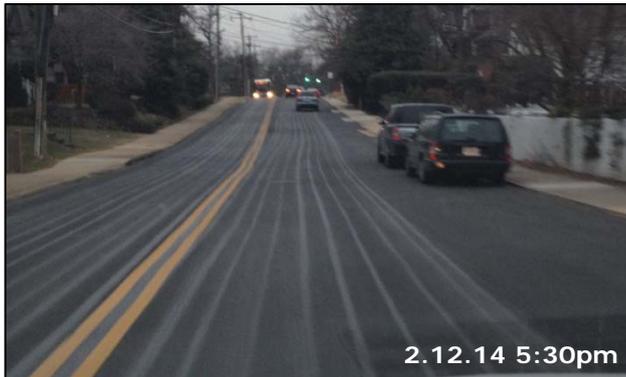
Type of Data	Results
Eastbound Volumes – Daily Total	6,238 vpd
Eastbound Volumes – Peak Hour	493 vph
Westbound Volumes – Daily Total	6,500 vpd
Westbound Volumes – Peak Hour	600 vph
King Street Daily Total	12,738 vpd
Bicycle Volumes (peak hour)	11.5 cyclist
Eastbound 85 th Percentile Speed	35.4 mph
Westbound 85 th Percentile Speed	32.7 mph
Bicycle & Pedestrian Crashes (5 year)	1 ped crash
Vehicular Crashes (5 year)	30 crashes



Parking Data Collection

King Street Parking Survey						
Date	Day	Time	Russell to Carlisle (20)	Carlisle to Highland (7)	Highland to Janneys (10)	Total
3/27/2013	Wednesday	8:00 PM	0	2	4	6
3/28/2013	Thursday	9:30 AM	0	0	1	1
4/2/2013	Tuesday	8:45 AM	0	1	1	2
4/4/2013	Thursday	1:45pm	0	2	0	2
4/4/2013	Thursday	7:30pm	1	4	0	5
4/4/2013	Thursday	9:00pm	0	0	2	2
4/5/2013	Friday	6:45am	0	0	3	3
4/12/2013	Friday	7:45am	1	0	1	2
4/15/2013	Monday	9:45 PM	0	0	1	1
4/21/2013	Sunday	2:30 PM	2	0	2	4
4/29/2013	Monday	7:15 PM	0	0	0	0
4/29/2013	Monday	9:00 PM	0	0	0	0
6/11/2013	Tuesday	6:45PM	0	1	3	4
6/11/2013	Tuesday	9:30PM	0	1	1	2
	AVERAGE (Russell to Janney's)		0.29	0.79	1.36	2.43
1/9/2014	Thursday	11:45AM	2	0	4	6
1/10/2014	Friday	9:00AM	0	0	2	2
2/3/2014	Monday	8:00AM	1	2	3	6
2/12/2014	Wednesday	1:00PM	0	1	1	2
2/12/2014	Wednesday	5:30PM	0	3	3	6
2/18/2014	Tuesday	9:30AM	0	0	5	5
	AVERAGE (Russell to Janney's)		0.35	0.85	1.85	3.05

Recent Parking Surveys





lose 1 space

Add 2 Spaces



17 Spaces against
the Fence with N
View Terrace
Addresses





6 spaces in front of 1 residence

3 spaces in front of 1 residence

Add 1 Space



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Next Steps

- City Council Public Hearing
 - March 15, 2014
- Installation of bike lanes if approved by Council
 - Spring 2014
- Installation of additional pedestrian improvements
 - Spring/Summer 2014

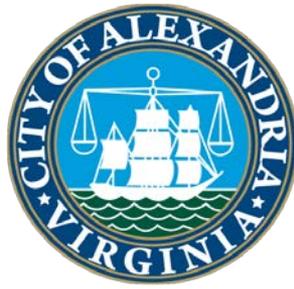


Questions/Comments

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For more information visit

<http://alexandriava.gov/localmotion/info/default.aspx?id=74320>



Thank you

Traffic and Parking Board

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